Effects of the Visible Transmission Corridor

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Presentation based on a Market Study by:

Ben Lansink, AACI, P.App, MRICS
Ward Lansink, AACI, P.App, DULE, B. Tech

Presented by:

Ben Lansink, AACI, P.App, MRICS
Introduction

• Ben Lansink is an experienced professional Real Estate Appraiser who has land use and land development experience.

• He has completed a variety of appraisal and consulting assignments and is now concentrating on analytical, holistic approaches to a real estate problem, usually to assist in litigation or the expropriation process.

• Mr. Lansink has completed Diminution in Value Studies that suggest properties may suffer *injurious affection* as a result of the proximity of Airports, Hydro Corridors, Land Fill Sites, Wind Turbines, and Arterial / Controlled Access Roads.
What is diminution in value?

A *loss in value* to a property caused by *obsolescence*. While the obsolescence may be curable, it may not be curable by a land owner.

For example, a land owner cannot move a hydro power transmission corridor or relocate a landfill operation.
Obsolescence, one cause of depreciation:

- an impairment of desirability and usefulness caused by new inventions, changes in design, improved processes for production, or
- external factors that make a property less desirable and valuable for continued use.

May be either functional or external.

Source: The Appraisal of Real Estate, Second Canadian Edition
“Great location, new roof, central air, underground storage tanks full of toxic waste, double garage, ceramic tile…”
Examples of *obsolescence* to a property are contamination of
the land or building as well as proximity to:

- a Land Fill site; Industrial next to Residential;
- a Hydro Power Transmission Corridor;
- a Hydro Generating Facility or a Sub-station compound;
- Wind Turbines, Communication Towers;
- a Fire Station, Ambulance Dispatch Facility;
- a Rail Station or Corridor, Subway Station, Airport;
- a Controlled Access Freeway or a main Arterial Road;
- a high risk Air Borne Disease location (an animal farm close to
  a transportation route); and
- other examples.
However, not all factors cause a diminution in value.

For example, a fire station next to a residential dwelling may cause value diminution; however, an industrial property next to the fire station may not be negatively affected and it will not suffer a value diminution.
Most people have an opinion regarding obsolescence and the effect on themselves, their surroundings, their property, and on society. The harm may be real or perceived and it may be different for each property and to each property seller and buyer. This perception is indicative of **how much one is willing to pay for a property**.
Effects of a Hydro Power Transmission Corridor Easement

1. Loss of control of the use of the corridor land;
2. Foreclosure of present or future land use;
3. Interference with operation of equipment;
4. Loss of efficiencies;
5. Loss of vistas;
6. Creation of safety hazards;
7. Real or perceived health issues, quite enjoyment;
8. Electric Magnetic Fields, stray electricity issues;
9. The Owner continues to pay realty tax; and
10. Owner has increased liability responsibilities.
1. Loss of control of the use of the corridor land

• Ontario Hydro used Agent Orange to clear power line corridors across the province, through city backyards and thick rural brush from 1950 to 1979. Hydro's own records, obtained by the Star, boast that in one 12-year period, the power company dropped enough chemicals in Ontario to cover a 30-metre-wide swath travelling “four-fifths the distance around the world.”

Source: thestar.com

• Crops may be destroyed, no trees are allowed to be grown beneath a tower or wires, no buildings or structures are allowed.
• Owners along an existing corridor complain that hydro power corridor maintenance has resulted in messy downed trees and brush left randomly to rot, often across existing paths and trails.

• At various times, a range of maintenance activities are conducted with the property owner having no control over when property entry can occur.

• Inspection of the hydro power lines may be conducted by foot patrol and climbing crews.
2. Foreclosure of present or future land use

- Removal of land from food production
- Proximity to hydro power transmission corridor restricts the placement of residential or agriculture structures
- Current structures may now be too close to the hydro wires to allow current uses
- Airborne diseases may restrict placement of large scale livestock buildings
- Buildings set back the greatest distance possible from the road to avoid possible airborne disease transmission from road animal transportation
- A hydro power corridor traversing land may exclude or restrict the location for an intensive livestock or poultry building footprint and the ‘as-of-right’ land uses’
For example, a modern large scale pork complex set-back from road to:

1. minimize air-borne disease; and
2. minimize extraneous (stray) voltage.
Would a pork complex be constructed on this land if a 500kV* corridor existed as in red?

If land use is restricted, is value affected?

* kV = Kilovolts, 1000 volts
3. Interference with operation of equipment

- Hydro wires tower structures get in the way
- GPS Problems
4. Loss of Efficiencies

- Negotiating equipment around the towers results in higher costs to cultivate and crop land
- Financial impact and loss
- Overhead lines and structures increase the time and financial costs of applying fertilizer or controlling pests impede the movement of machinery to prepare or harvest crops and restrict the ability of farmers to run metal fences parallel with lines due to the possibility of induced current.*

* Source: NZIER by Peter Bailey and Peter Clough and reviewed by Jean-Pierre de Raad.
5. Loss of Vistas

• towers and wires are not attractive
6. Creation of Safety Hazards
7. Real or perceived health issues, quite enjoyment

Electric and magnetic fields are strongest when close to their source. As you move away from the source, the strength of the fields fades rapidly. This means you are exposed to stronger electric and magnetic fields when standing close to a source (e.g., right beside a transformer box or under a high voltage power line), and you are exposed to weaker fields as you move away.

Source: Health Canada Website
Health example:

Scientists at Health Canada are aware that some studies have suggested a possible link between exposure to ELF (extremely low frequency) fields and certain types of childhood cancer.

After a recent evaluation of the scientific data, the International Agency for Research on Cancer classified ELF magnetic fields as "possibly carcinogenic" to humans based on studies of childhood cancer.

Source: Health Canada Website
Quiet enjoyment example:

“Helicopter inspections ... twice a year ... scheduled to be concurrent with inspection of the adjacent existing transmission lines. In order to ensure that the transmission facilities are operated and maintained in a safe, reliable and efficient manner, management activities within the Project ROW would be undertaken by small crews, generally every seven years. These would include activities such as:

• periodic tree cutting;
• soil stabilization;
• inspection patrols; and
• selective herbicide application.”

Source: The November 08 Environmental Assessment by Hydro One Networks Inc.
8. Electric Magnetic Fields, Stray Electricity Issues

- Reduction in milk production due to stray electricity creating electric shocks from milking equipment

- Because stray voltages on a farm do not exceed 0.5 V does not mean that the farmer will be free of stray voltage problems. Sensitivity to electrical current varies with parts of the body through which it passes, it is possible that cows might be even more sensitive to stray voltage if the current passes through the teat or tongue.
• Poultry, dairy and other livestock herds can be and are affected by stray, tingle, or neutral to earth voltage. Many believe the problem may not be curable if poultry and animals are housed and kept close to a hydro power corridor.

• While not an issue historically, today the farmer developer will want the buildings set back the greatest distance possible from the road to avoid possible airborne disease transmission from road animal transportation.

• A hydro power corridor traversing land may exclude or restrict the location for an intensive livestock or poultry building footprint and the ‘as-of-right’ land uses’.
A large number of studies have been carried out investigating the effects of EMF on circulating melatonin levels in animals, because of the possible links between EMF and breast cancer. The impact of melatonin on reproduction is particularly pronounced in seasonally breeding animals, where the effect varies depending on the length of gestation in order to ensure that the offspring are born in late spring when food is plentiful.

Delgado et al. (1982) reported that weak pulsed ELF magnetic fields ... affected the early development of chicken embryos examined after 48 h of incubation. Quail embryo development has been reported to be affected by exposure to ELF magnetic fields (Terol & Panchon, 1995).
• An Ontario horse farmer complained that a horse in foal while in pasture next to an existing 500 kV corridor had an 85 to 95% chance of **still birth**. When not kept next to the 500kV corridor, the birth rate was normal.
9. The Owner continues to pay realty tax

- Owners are forced to pay realty taxes on land they may not be able to use and no longer have control over.

- Many appraisers and HONI argue that it is an ‘industry standard’ to pay 75% of the Fee Simple value of an easement. There is no support for this statement, most utility companies pay 100%, and some pay more. Given the lost rights and additional liabilities, payment must be based on 100% of the Fee Simple value for a 500kV easement.
10. Owner has increased Liability Responsibilities

• Increased insurance premiums
“Mind you, I’m not responsible for the entire pipeline – just the section that flows through my office.”
How is the harm measured?

To estimate the detrimental effect, harm or *injurious affection* it is necessary to consider:

1. Has the property been **harmed or injured** by the hydro power transmission corridor?
2. Is there **obsolescence** resulting in value diminution (incurable by the owner)?
3. Is there a **reduction in market value**?
4. Is there an **improvement or set-off** that has increased the market value?
Value Diminution

*Value diminution*, if any, is best measured by an analysis of the actions of *willing buyers* and *willing sellers* functioning in the open market.
Market Study

Lansink Appraisals and Consulting

Market Study
- Diminution in Value
- Injurious Affection
- Visible Easement

Hydro Power Transmission Corridor Analysis

Ben Lansink, AACI, P.App, MRICS
Ward Lansink, AACI, P.App, DULE, B. Tech
Does the construction and use of a 500kV high-voltage hydro power transmission corridor on all or part of a property cause a diminution in value?
The Bruce to Milton High Voltage Power Corridor 2008

The Bruce to Milton power corridor is a Hydro One Networks Inc. (HONI) project being undertaken to meet Ontario’s future electricity delivery needs.
The purpose of the undertaking is

• to widen and increase the capacity of the Bruce to Milton corridor;

• to transmit electrical power from committed and future sources in the Bruce area to the provincial grid and the GTA; and

• to increase energy security and maintain system reliability for the people of Ontario.
Lake Huron to the GTA
EA Map
Existing & Proposed

Right of Way is 175 feet wide and the tower is 160 feet tall.
Before the purchase by Ontario Hydro...
After the sale by Ontario Hydro...
Typical Easement

Typical Hydro Easement in Ontario (quoted in part):

HONI...hereby takes and expropriates an unrestricted grant and easement, free from all encumbrances and restrictions, of the following unobstructed and exclusive rights, easements, and privileges (sic) in perpetuity in, through, under, over, across, along and upon a portion of the Lands described as...

(the "Strip") for the following purposes:
Typical Easement Text

(a) To enter and lay down, install, construct, erect, maintain, open, inspect, add to, enlarge, alter, repair and keep in good condition, move, remove, replace, reinstall, reconstruct, relocate, supplement and operate and maintain at all times in, through, under, over, across, along and upon the Strip an electrical transmission system and telecommunications system consisting in both instances of pole structures, steel towers, anchors, guys and braces and all such aboveground or underground lines, wires, cables, telecommunications cables, grounding electrodes, conductors, apparatus, works, accessories, associated materials and equipment, and appurtenances pertaining to or required by either such system (all or any of which are herein individually or collectively called the "Works") as in the opinion of HONI are necessary or convenient thereto for uses as required by HONI in its undertaking from time to time, or a related business venture.

(b) To enter on and selectively cut or prune, and to clear and keep clear, and remove all trees (subject to compensation for merchantable wood values), branches, bush and shrubs and other obstructions and materials in, over or upon the Strip, and without limitation, to cut and remove all leaning or decayed trees located on the Lands whose proximity to the Works renders them liable to fall and come in contact with the Works or which may in any way interfere with the safe, efficient or serviceable operation of the Works or this easement by HONI.

(c) To conduct all engineering, legal surveys, and make soil tests, soil compaction and environmental studies and audits in, under, on and over the Strip as HONI in its discretion considers requisite.

(d) To erect, install, construct, maintain, repair and keep in good condition, move, remove, replace and use bridges and such gates in all fences which are now or may hereafter be on the Strip as HONI may from time to time consider necessary.
(e) Except for fences and permitted installations, to clear the Strip and keep it clear of all buildings, structures, erections, installations or other obstructions of any nature whether above or below ground, including removal of any materials and equipment or plants and natural growth which in the opinion of HONI, endanger its Works or any person or property or which may be likely to become a hazard to any Works of HONI or to any persons or property or which do or may in any way interfere with the safe, efficient or serviceable operation of the Works or this easement by HONI.

(f) To enter on and exit by the owners' access routes and to pass and repass at all times in, over, along, upon, and across the Strip and so much of the Lands as is reasonablly (sic) required, for HONI, its employees, agents, contractors, subcontractors, workmen and permittees with or without all plant machinery, material, supplies, vehicles and equipment for all purposes necessary or convenient to the exercise and enjoyment of this easement, subject to compensation afterwards for any crop or other physical damage to the Lands or permitted structures sustained by the owners caused by the exercise of this right of entry and passageway.
Analysis Procedure

‘Bruce to Milton’ Analysis Procedure

• Over 60 properties were analyzed, of which 37 properties are detailed in the study.

• Most of the properties were purchased and sold by Ontario Hydro in the 1977 to 1983 era; two were purchased and sold by Ontario Hydro in the 1990s.

• During the sale and resale period, it is understood that no other changes were made to the properties detailed in this study.
‘Bruce to Milton’ Conditions

1. Each property was purchased in its entirety from a willing seller by Ontario Hydro, a willing buyer, at the fair market value of an open market;

2. The expropriation authority, Ontario Hydro, created an easement across the property for the construction, use and maintenance – all in perpetuity – of the additionally required strip of land to accommodate the new 500kV hydro power transmission line.

3. The property in its entirety was then sold by Ontario Hydro, a willing seller, to a willing buyer in an open market at fair market value.
Historical Facts

- Public building permit records were canvassed to confirm there was no building activity between the purchase and sale dates.

- Aerial photos were checked for any changes that may have occurred.
The ‘Bruce to Milton’ properties studied were grouped as follows:

<table>
<thead>
<tr>
<th>Group</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A</td>
<td>Vacant Land, Existing Hydro Power Corridor</td>
</tr>
<tr>
<td>Group B</td>
<td>Land with Building(s), Existing Hydro Power Corridor</td>
</tr>
<tr>
<td>Group C</td>
<td>Land with Building(s), New Hydro Power Corridor</td>
</tr>
</tbody>
</table>
**Single Property Analysis**

**‘Bruce to Milton’ Typical Analysis Example**

<table>
<thead>
<tr>
<th>Description</th>
<th>2006</th>
<th>2007</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market Price June 2006</td>
<td>$3,500</td>
<td>$3,750</td>
<td>$250</td>
</tr>
<tr>
<td>%Change</td>
<td></td>
<td>7.14%</td>
<td></td>
</tr>
<tr>
<td>Subject sold June 2006 BEFORE the easement taking for $3,814 per acre but would have resold July 2007 assuming NO easement taking for $4,086 per acre.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Actual Price June 2006</td>
<td>$3,814</td>
<td>$3,000</td>
<td>-$814</td>
</tr>
<tr>
<td>%Change</td>
<td>7.14%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted Price July 2007</td>
<td>$4,086</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Actual Price July 2007</td>
<td></td>
<td>$3,000</td>
<td>-$1,086</td>
</tr>
<tr>
<td>%Difference</td>
<td></td>
<td>-26.59%</td>
<td></td>
</tr>
</tbody>
</table>
## ‘Bruce to Milton’ Results

<table>
<thead>
<tr>
<th>Group</th>
<th>Diminution in Value (Min)</th>
<th>Diminution in Value (Max)</th>
<th>Diminution in Value (Average)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Group A</strong>: Vacant Land, Existing Hydro Power Corridor</td>
<td>-4.76%</td>
<td>-54.23%</td>
<td><strong>-27.80%</strong></td>
</tr>
<tr>
<td><strong>Group B</strong>: Land with Building(s), Existing Hydro Power Corridor</td>
<td>-6.29%</td>
<td>-53.50%</td>
<td><strong>-22.57%</strong></td>
</tr>
<tr>
<td><strong>Group C</strong>: Land with Building(s), New Hydro Power Corridor</td>
<td>-10.50%</td>
<td>-46.65%</td>
<td><strong>-36.39%</strong></td>
</tr>
</tbody>
</table>
Conclusion

‘Bruce to Milton’ Conclusion

By comparing properties that were

• purchased without a power transmission line and
• sold with a power transmission corridor,

this study concludes that a visible power transmission corridor may negatively affect the value of a property over which the visible hydro power transmission corridor traverses.
Paired Sale Study

Sale 1: 216 Concession 6 East, Elmwood

• Property:
  • A 152.16-acre site, gently rolling
  • some bush
  • estimated 70% workable

• Improvements:
  • a 1.5 storey aluminum clad wood frame building designed and constructed to house a single detached dwelling,
  • an obsolete bank barn, and
  • a small shed.

• Environment:
  • Concession 6 East is a gravel road
  • located on the north side of Concession 6 East in a rural agricultural neighbourhood
  • north of Walkerton and Hanover.
Paired Sale Study

Sale 1: 216 Concession 6 East, Elmwood

Sale 1 is traversed by a 230 kV and a 500 kV hydro power transmission corridor.
Paired Sale Study

Sale 2: 442 Sideroad 25 North, Walkerton

• Property:
  • a 101.12 acre site, gently rolling
  • some bush; traversed by a drain and/or creek
  • estimated 70% workable

• Improvements:
  • a 1.5 storey brick building designed and constructed to house a single detached dwelling,
  • an obsolete bank barn, and
  • a wood frame shed.

• Environment:
  • Sideroad 25 North is a gravel road
  • located on the north side of Concession 4 East in a rural agricultural neighbourhood,
  • north of Walkerton and Hanover, very close to Property 1.
Paired Sale Study

Sale 2: 442 Sideroad 25 North, Walkerton

Sale 2 is not traversed by a hydro power transmission corridor.
**Paired Summary**

**Paired Sales Study Summary**

<table>
<thead>
<tr>
<th>Property</th>
<th>Price</th>
<th>Acres</th>
<th>$/Acre</th>
<th>Sale Dates</th>
<th>%Time</th>
<th>$Time</th>
<th>Adjusted Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>$427,000</td>
<td>152</td>
<td>$2,806</td>
<td>May 01-08</td>
<td>5.89%</td>
<td>$165</td>
<td>$2,972</td>
</tr>
<tr>
<td>2</td>
<td>$370,000</td>
<td>101</td>
<td>$3,659</td>
<td>Apr 01-10</td>
<td>-</td>
<td>-</td>
<td>$3,659</td>
</tr>
</tbody>
</table>

Dollar Difference: -$687

Percentage Difference: -18.79%

Despite the adjustment for the passage of time, Sale 1 suffers from a **diminution in value** due to the negative effect of the hydro power transmission lines that traverse it.
Clearview

Steel Towers to replace Wooden Poles

Township of Clearview

In the 1990s Hydro One intended to increase the width of an existing 100-foot wide hydro power corridor easement in the Township of Clearview by 20 feet, replace the existing 35-foot high wooden poles with 130-foot high metal towers, and replace the existing 44kV lines with 230kV lines.

Hydro One purchased numerous properties (on the open market) and resold the properties (on the open market) AFTER creating an easement for the construction, use, and maintenance – all in perpetuity – of the additional strip to house the 230-kV hydro power transmission line.
To determine the diminution in value (if any) after the easement, each property sale and resale was analyzed, comparing

- the **purchase price** BEFORE widening the easement
- to the **sale price** AFTER widening the easement.

<table>
<thead>
<tr>
<th>Example #</th>
<th>Lot</th>
<th>Vacant or Building</th>
<th>Existing Corridor</th>
<th>Proposed Corridor</th>
<th>Diminution in Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1D</td>
<td>1270 Fairgrounds Road</td>
<td>Building</td>
<td>44kV and 115kV</td>
<td>230kV</td>
<td>-56.76%</td>
</tr>
<tr>
<td>2D</td>
<td>1636 Centre Line Road</td>
<td>Building</td>
<td>44kV and 115kV</td>
<td>230kV</td>
<td>-30.65%</td>
</tr>
</tbody>
</table>

Average Loss (Diminution in Value) **-43.71%**
Median Loss (Diminution in Value) **-43.71%**
Min Loss (Diminution in Value) **-30.65%**
Max Loss (Diminution in Value) **-56.76%**
Lazar Precedent at 30%

Lazar v. Hydro One, Ontario Municipal Board (OMB)

In *Lazar v. Hydro One*, Ontario Municipal Board (OMB) File LC010005, June 11, 2002, OMB Decision No. 0781, the issue was to determine if there was “injurious affection” caused by the widening of an easement and the erection of 130-foot metal towers on the easement.

The appraiser for Hydro One claimed that the towers had no impact on the value of the lands; however, the appraiser for Mr. Lazar conducted a thorough market analysis that supported a negative impact caused by the towers.
The Ontario Municipal Board was satisfied that the erection of the towers would have an injurious effect on the value of the lands. The OMB decided that

“[the injurious affection] would be in the range of 30% to 54%”

based on

“open market evidence gathered and analyzed by an AACI.”
In *Lazar*, the Ontario Municipal Board concluded

-30% injurious affection

and the decision was not appealed by Hydro One.
Market Study: Conclusion

A visible power transmission corridor **may negatively affect the value** of a property over which the visible power transmission corridor traverses.

<table>
<thead>
<tr>
<th>Example</th>
<th>Diminution in Value (Min)</th>
<th>Diminution in Value (Max)</th>
<th>Diminution in Value (Average)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bruce to Milton 1977 to 1986</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group A: Vacant Land, Existing Hydro Power Corridor</td>
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<td>-54.23%</td>
<td>-27.80%</td>
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<tr>
<td>Group B: Land with Building(s), Existing Hydro Power Corridor</td>
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<tr>
<td>Group C: Land with Building(s), New Hydro Power Corridor</td>
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<td>-46.65%</td>
<td>-36.39%</td>
</tr>
<tr>
<td><strong>Steel Towers to replace Wooden Poles</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lazar v. Hydro One, Ontario Municipal Board (OMB)</td>
<td>-30.65%</td>
<td>-56.76%</td>
<td>-43.71%</td>
</tr>
<tr>
<td>Paired Sales</td>
<td>-18.79%</td>
<td>-18.79%</td>
<td>-18.79%</td>
</tr>
</tbody>
</table>
Market Study: Question

Should Ontario Hydro purchases be considered open market sales?

• Do these sales meet the willing seller/willing buyer/open market concept?

• Were Ontario Hydro purchases made under a direct or implied threat of expropriation, and theoretically, at least, were not free and voluntary?
Response

1. When purchasing these properties, Ontario Hydro received and accepted a deed signed by the grantor (seller) stating:

‘...total consideration $X represents Ontario Hydro’s opinion of the market value of the lands; and $Y represents entitlements which would have been paid under The Expropriations Act had the property been expropriated by Ontario Hydro.’
2. Once Ontario Hydro created the easement requirements for the new 500kV hydro power transmission line, it marketed and sold the lands via the **open market**, and signed a deed that included a sworn Affidavit stating the “total consideration”

‘represents Ontario Hydro’s opinion of the **market value of the lands**’. 
3. It is understood that the majority of the properties were sold by a Realtor® and had been exposed to the open market.

4. It seems logical that a meeting of the minds has occurred when a purchaser acquires rights for an advertised price and that the sale constitutes competent market evidence.

5. Ontario Hydro is a public corporation and as such it must obtain fair market value for any property it sells.

6. Ontario Hydro does not give an ‘equity gift’ to a stranger.
Something to think about...

Some just ain’t cut out for wind farmin’.
Hydro – Communication - Wind

Hydro Lines and Towers
versus
Communication and Wind Turbine Towers
## Ontario Government Payments

Remote-Rural Zone <0.033 hectare or 0.08 Acres (3,552 sq. ft.) = $6,368
Rural Zone >0.033 hectare or 0.08 Acres (3,552 sq. ft.) = $7,640

<table>
<thead>
<tr>
<th>Subject</th>
<th>Policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication Tower Sites on Crown Land</td>
<td>PL 4.10.02</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Compiled by - Branch</th>
<th>Section</th>
<th>Date Issued</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lands &amp; Waters</td>
<td>Land Management</td>
<td>November 30, 2005</td>
<td>1 of 9</td>
</tr>
</tbody>
</table>
### TABLE A—ZONAL RENTAL RATES

<table>
<thead>
<tr>
<th>Year</th>
<th>Remote/Bush Zone</th>
<th>Remote Zone</th>
<th>Rural Zone (sites up to 0.033 ha.)</th>
<th>Rural Zone (sites over 0.033 ha.)</th>
<th>Population Centre</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>$4,037.00</td>
<td>$5,769.00</td>
<td>$5,769.00</td>
<td>$6,922.00</td>
<td>$9,229.00 *</td>
</tr>
<tr>
<td>2007</td>
<td>$4,138.00</td>
<td>$5,913.00</td>
<td>$5,913.00</td>
<td>$7,095.00</td>
<td>2006 fee + 2.5%</td>
</tr>
<tr>
<td>2008</td>
<td>$4,241.00</td>
<td>$6,061.00</td>
<td>$6,061.00</td>
<td>$7,272.00</td>
<td>2007 fee + 2.5%</td>
</tr>
<tr>
<td>2009</td>
<td>$4,347.00</td>
<td>$6,213.00</td>
<td>$6,213.00</td>
<td>$7,454.00</td>
<td>2008 fee + 2.5%</td>
</tr>
<tr>
<td>2010</td>
<td>$4,456.00</td>
<td>$6,368.00</td>
<td>$6,368.00</td>
<td>$7,640.00</td>
<td>2009 fee + 2.5%</td>
</tr>
<tr>
<td>Non cellular rate 2006 to 2010</td>
<td>$2,500</td>
<td>$2,500</td>
<td>$2,500</td>
<td>$2,500</td>
<td>$2,500</td>
</tr>
</tbody>
</table>
## One Time vs. Yearly Payments

Communication Tower or Wind Turbine Tower lease payment PER YEAR in 'Perpetuity' typically adjusted every 5 years, 2008 Bruce County.

<table>
<thead>
<tr>
<th>Net Rent</th>
<th>Acres</th>
<th>$/Acre</th>
<th>Cap Rate</th>
<th>Value/Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>$8,000</td>
<td>2</td>
<td>$4,000</td>
<td>5.0%</td>
<td>$80,000</td>
</tr>
<tr>
<td>$8,000</td>
<td>2</td>
<td>$4,000</td>
<td>7.5%</td>
<td>$53,333</td>
</tr>
<tr>
<td>$8,000</td>
<td>2</td>
<td>$4,000</td>
<td>10.0%</td>
<td>$40,000</td>
</tr>
</tbody>
</table>

Hydro Tower and Power Lines in Ontario 2008, Bruce County

<table>
<thead>
<tr>
<th>Description</th>
<th>$/Acre</th>
<th>% of Fee</th>
<th>Value/Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>HONI - Typical</td>
<td>$4,000</td>
<td>75.0%</td>
<td>$3,000</td>
</tr>
<tr>
<td>Injurious Affection</td>
<td>$4,000</td>
<td>10.0%</td>
<td>$400</td>
</tr>
</tbody>
</table>

Total 'ONE' Time Payment for Easement in Perpetuity $3,400
One Time vs. Yearly Payments Cont’d

It is reasonable to assume that Rogers Wireless Inc., Bell Canada, the Government of Ontario, and/or Wind Turbine Developers are aware of the market value per acre.

It is also reasonable to assume that a premium is paid for the use of land as they are aware that telecommunication towers and/or wind turbines cause a diminution in value to the remainder.
One Time vs. Yearly Payments Cont’d

Communication Towers and Wind Turbine Towers owners make payments yearly in ‘Perpetuity’.

Hence, one may conclude that a significant portion of land lease payments are made in acknowledgement of a diminution in value.

In other words, the land has been *injuriously affected* by tower use.
AltaLink Alberta

AltaLink is an independent company that owns and operates approximately 11,800 kilometres of transmission lines and approximately 270 substations. They provide electric service to more than 85 per cent of Albertans and work to maintain the safest, most reliable transmission facilities possible.
Annual Structure Payments

AltaLink engaged an independent appraiser to review the compensation that industries pay to landowners for other types of structures located on agricultural lands.

AltaLink has reviewed the findings and has proposed increases to the Annual Structure Payment based on the payments made to landowners by the oil and gas industry.
Factors being considered include

- the area that it takes to construct a structure(s),
- the area enclosed by the structure(s) once operational,
- the tangible production loss due to the structure’s location, and
- the intangible effect on cultivation.

AltaLink makes payment on both cultivated and uncultivated lands at different rates.
The Annual Structure Payment is also to compensate landowners, in part, for

- the inconvenience and additional costs associated with weed control, additional operation time, additional seed, pesticide and fertilizer used when farming around the AltaLink structures

- loss of crop within and around the structures due to compaction, double seeding, and double spraying.
Thank You

I hope you have enjoyed my presentation and that you will find the information helpful in your own appraisal practice. I thank the Appraisal Institute of Canada for inviting me to speak to you today.

If you would like to contact me about this study, my contact information is set out below.

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